









## Horticultural.

## MICHIGAN FORESTRY COMMISSION REPORT.

The Michigan Forestry Commission was established by act of the Legislature in June, 1887. By this act the State Board of Agriculture was constituted a commission, to be known as the Independent Forestry Commission.

The duty of the Commission as defined by the act is, in brief, to inquire as to the amount of forests destroyed by fire and other causes, also the effect of such destruction upon climate, water power, etc.

It is further provided that blanks shall be furnished by the commission to the supervisors of the different townships whose duty it shall be to report the extent and condition of the forest land in their respective townships, also to report the damage done by fires to standing and different forms of cut timber, the most effectual method of checking fires and the need, if there be such, of forestry legislation.

The commission appointed as its directors Dr. W. J. Beal and Hon. Chas. W. Garfield. The first report of the directors has just been published and copies will be circulated where it is hoped they will do the most good. The report contains much valuable information concerning the present condition of Michigan forests, the value and uses of the different kinds of timber, and notes concerning the forest, as affecting the climate and the problem of rotation of forests, etc. The material for the report was obtained from several sources.

A portion is devoted to abstracts of several papers which were read at a forestry convention held in Grand Rapids, January, 1888.

The subjects of forest succession, lumbering, and the trees and shrubs of Michigan are treated of by Dr. Beal, who spent some time in the northern part of the State collecting and preparing data on those points.

The report of the supervisors is not so full as could be desired but this is due to the rather meager and unsatisfactory replies of the supervisors themselves.

Letters from prominent men in different parts of the State form a valuable feature of the work, as do also several extracts from *Garden and Forest*.

Besides the present separate issue the report will also appear in the Michigan Agricultural Report for 1888, which is about to appear.

All granges or farmers' clubs or persons wishing a copy of the Forestry Report may obtain it by writing to the State Forestry Commission, Agricultural College, Mich.

C. B. WALDRON.

## A LIST OF PEARS.

A good list of pears for market as well as for home use should include:

1. Tyson. There is no early pear to equal this. I shall never forget my first acquaintance with it. It is a great bearer and if headed low, as all pears should be, comes early into fruit. The tree is upright, open, stout and healthy. Season, August.

2. Bartlett. To the exclusion of Clapp's Favorite, which is decreasing in favor with growers and shippers. Season, September.

3. Howell. This is a grand and handsome pear; growth strong and does well as a dwarf or standard.

4. Flaming Beauty. This variety crooked badly for a few years but is doing grandly now. It needs an open, sunny location and must not be at all crowded. Let the land also be well drained.

5. Sheldon. The finest table pear in the world, and good for canning also, but not as good as Flaming Beauty, Bartlett and Louise. Picked early in September and stored in a cool cellar, it will be in good order for two months. It is large and handsome and the tree is very productive. Even the smallest pears on the tree are always delicious; so there is no waste fruit.

6. Louise Bonne. This pear was for a time under a cloud, but it is an admirable fruit. The tree is always loaded and if kept well opened to the sun the fruit is soon ripened. It should not be picked too soon; indeed, it is one of those sorts that should be left on the trees till frost, then placed in cool rooms to ripen slowly.

7. Onondaga. This pear is too large, too prolific and generally too well flavored to be left out of the list. But I have had stringent Onondagas. The tree is a noble, large-headed grower and bears young.

8. The Seckel everybody knows, and while it is no longer profitable for market, it is so delicious that it must remain for home use.

9. Clairgean. This pear is the most beautiful of all as well as the largest and heaviest. When ripening it colors up in crimson and gold. It must be picked about October first and stored, and is fit for use about the last of November. It has one drawback, it must be marketed at once, as the coloring on it turns black.

10. D'Anjou—the noblest Roman of them all. This tree is perfect in form and grows with great rapidity. The quality of the fruit is simply superb. The pear is smooth, large, light green, ripening to a lemon yellow, melting, juicy and refreshing. It should be picked in October and will keep until Christmas. It is the pear for profit.

11. Lawrence. For early winter, is a capital sort, smooth, bright, prolific and sweet.

12. The Jones pear promises to be the best for mid-winter, and Josephine de Malines for late winter.

Besides the above I grow a group of Buffums on my tree lawn, for their upright form, much resembling the Lombardy poplar. It also gives the most gorgeous coloring of all pears as to autumn foliage.

Mulch your pears when set and always keep them mulched. Let no manure be put in about the roots, but top dress with manure if the land is poor. Seckel and some others need considerable stimulating and feeding by top dressing. Don't plow your pear orchard, but fork about the trees thoroughly and then renew the mulch.

Scrape the bark and dig out all bark borers; the wood borers seldom attack pears; kill off professional tree trimmers; let no suckers or weak shoots grow; keep the trees headed low; head back half the growth the first five years; it is also essential to keep the top open and let the trees stand far enough apart to be freely open to sun and air.

Good materials for mulching are coal

ashes (anthracite), hardwood sawdust, loose manure and other substances.

The best dwarfs are Louise Bonne, Howell and Duchess, with all odds in favor of Louise. Among the very good sorts I have not included in the above are Dr. Reeder, Bosc; in some localities and double worked, Gray Doyenne, Bourne Superfin, Belle Lucrative, a sweet and great bearer, but too dull in color, and White Doyenne or Virgallien, which is no longer crackling as it did for a time.—E. P. Powell, in *Popular Gardening*.

## That Unknown Vine Disease.

About three years ago a peculiar vine disease made its appearance in Southern California, principally in the San Gabriel and Santa Ana valleys in Los Angeles County, which has seriously affected the wine output in that section as well as the raisin production at Orange, Tustin, Santa Ana and McPherson districts. It has so far baffled the combined skill of local and imported experts, who have closely studied this disease, endeavoring to ascertain the causes and prescribe a remedy if possible; but so far without result. No name has yet been given to this terrible scourge. Thousands of acres of vines have been killed and thousands more are dying. Few if any varieties of vines are exempt from its fatal attack. The expert at present investigating the matter in the San Gabriel valley on behalf of the Viticultural Commission of the State, has made some lengthy reports, but as yet few if any conclusions have been arrived at, that throw any new light upon the subject or reveal any new features. The disease, we understand, has made its appearance lately in Sonoma County and it reports are true, Fresno is not exempt. The only district in Southern California not affected, we understand, is Riverside. It seems to be a noticeable fact that this disease is particularly partial to vineyards and vines grown in irrigated districts. Can it not be possible that the water used for irrigation purposes and the soil irrigated furnished as plant food by this excessive leaching process, have something to do with this disease? Would it not be well to call the attention of the experts to the water used in the various districts where the disease thrives and is working such destruction? It appears to be a stage of the sap flow which produces this very peculiar disease, resembling what might be termed a wet rot. One thing is certain that the districts infected are doomed and grape growers for wine and raisin making purposes will soon be with them a thing of the past. Every effort should be made to discover, if possible, the cause, and if possible, furnish a remedy so as to prevent its further spread, as California at this time can ill afford to suffer from the ravages of a vine disease of such fatal character as the one at present at work in the vineyards of Los Angeles County.—*California Fruit Grower*.

## Insects that Aid Us.

There is among our people an almost universal aversion to insects (or "bugs"), as all insects are contemptuously styled which often reaches to dread. This feeling had birth ages ago; has been so long indulged as to become instinctive; and so, though without cause or foundation, is very difficult to eradicate. This groundless fear is a grave misfortune. Insects are among the gems of the organic world—as beautiful as and often far more interesting than the handsomest flower. Their study is wholesome and wonderfully fascinating. Moreover, they are great economic importance. Some are enemies destroying household goods, and nearly all field and garden crops. Others are most emphatically friends, fighting and overcoming enemies—enemies that would otherwise bring to naught our most beneficent industries. How desirable, then, that we become familiar with these insect hosts; for thus only can we know friends from enemies, and protect the one while striving to exterminate the other. Every wise parent will seek to overcome this mischievous fear on the part of the child. By beginning at the earliest kindergarten age to show the child that insects are curious, beautiful and most interesting objects for study, we may easily supplant the instinctive dread with interest. I know from experience that this is an easy task, and a cheap way to arouse in the child an ambition to observe and study, to keep him from temptation of street and saloon by filling his time with that which is elevating. The merely practical man sees daily the evil done to his crops by insect pests, and thus believes all insects injurious, and so, through ignorance, is as eager to destroy friends as enemies. I often receive from farmers, gardeners and others insects whose only work it is to aid man, with the question: "How can we best destroy these insects which are very numerous and threaten to ruin everything?"

There are two groups of beneficial insects other than bees, like the bee and silk moth, which furnish commercial products. Predaceous insects spring upon other insects and devour them as does the cat the mouse. Thus many noxious insects, which from their concealment in the earth and from their countless numbers, are beyond man's reach, are held in check by these savage insect raiders. Parasitic insects, of which there are thousands, ranging from the most minute to those two or three inches long, are such as lay eggs upon or within other insects. As the egg hatches the young larva begins to feed upon its host, which lives till its devourer is full-grown. Sometimes scores of eggs are laid within a single grub or caterpillar; and thus while the caterpillar is feeding, for instance, upon our cabbage, scores of parasites are feeding upon him. Often the caterpillar has strength to spin a cocoon to protect its enemies, which have devoured it alive, and then dies a miserable death. The activity and numbers of these parasites explain the fact of insect years. The army worm, the Hessian fly and the cutworms come upon the farmer like a deluge this year; but next year, owing to faithful parasites, they attract no attention; our friends the parasites have almost exterminated in these cases our enemies, the army worms, etc. If farmers knew these parasites and the way they work, discouragement and foolish neglect to plant would often be avoided. A farmer loses his wheat by the Hessian fly, which often creates a worse corner than even "Old Huteh." He reasons: "The evil will doubtless be greater next year; I will sow no wheat." Yet a little close attention would reveal the myriad

parasites, which insure a riddance of the enemy and promise a good crop for the next season.

Again, in destroying insects we often come upon those—sometimes larvae, sometimes pupae—which look black and diseased; these are harboring our insect friends and so should not be destroyed. Again, many larvae, like those of the cabbage caterpillars, tomato and grape sphinxes, are frequently seen with whitish or yellowish egg-like masses thickly covering the back; these little bodies are cocoons of parasitic flies, and so should never be destroyed. Of predaceous insects most likely to be killed are the wasps. All the wasps are predaceous, and do great good in killing insect pests. The dread of wasps is needless; as they rarely sting if unmolested. Not only yellow-jackets, and the large white-faced wasps (usually called white-faced hornets), but the solitary mud-wasps (which are usually black or black and brown, or blue-black or blue) are also friends, as they kill and devour hosts of our worst insect pests. The ground beetles, which are usually black, with long legs, fitted for running, are also good friends. They destroy hosts of cutworms, white grubs, etc. These ground beetles are often seen in grass, under stones and boards; their black color and long legs and quick-running habit makes it easy to identify them. The little yellow, rounded ladybird beetles are predaceous and very valuable. These are often orange, and many species have black dots upon their backs. These beetles feed upon plant-lice and other insects and should never be destroyed. Not only do the beautiful little beetles feed upon insects, but the elongated grubs or larvae are equally our friends. I have often received these ladybird beetles from those who found them in the house and feared they might be the carpet beetle. The buffalo carpet beetle is hardly larger than a pinhead, and so need never be mistaken for these, or these for them.—*Prof. A. J. Cook, in N. Y. Tribune*.

## The Origin of the Seckel Pear.

The Philadelphia Press, in an article descriptive of certain portions of the Quaker City, relates the following:

The celebrated "Seckel" pear is another Neck production, and this delicious fruit was first sold in the old "Sunday" market, Moyamensing Avenue, south of Federal Street. This tree was discovered in a swamp on Hollander's Creek, near the inside channel, towards League Island, by an old Dutch hostler about seventy-five years ago. He kept the secret of the tree's locality for several years, but he gave the fruit to his friends and its fame spread abroad. The swamp in which the tree was located belonged to Mr. Seckel, of the brewing firm of Smith, Seckel & Pepper, who for years carried on business at Fifth and Minor Streets at what was afterwards called the old Falstaff Hotel. Mr. Seckel made search for the tree, and discovering it, had it carefully taken up and transplanted to his country seat, which is now the middle section of Laurel Hill. From this parent tree thousands of scions were cut.

Stephen Girard was a great lover of the "Seckel" pear, and was its assiduous cultivator. He was also very fond of strawberries, and his great happiness was to gather about him on Sunday afternoon at his homestead in the Neck the celebrated Frenchmen of the day to eat strawberries and cream. He raised plenty of other fruit and would give liberally to the boys if they asked for it, but was bidden the urchin who was caught stealing it. When his apple-trees rotted in the heart he used to fill the cavity with old newspapers, rammed down tight. He would have a half dozen stout Irishmen in attendance upon him, their arms filled with papers, but he performed the manual labor himself. Just why he did this no one has ever been able to find out.

## Pointers for Peach Growers.

In reply to my question, what varieties to plant, a successful peach nurseryman said: It depends as much upon the grower as upon varieties, whether large high colored fruit of good quality, and abundant crops are secured or the reverse.

Trees of the same varieties have been planted by two men in the same neighborhood and one would have choice fruit and large profits and the other inferior fruit and a loss. The former fertilized and cultivated well and kept the borers out; while the latter cultivated rarely and perhaps tilled deep enough to injure the roots in some places and too shallow in others, took out the borers once in two or three years and allowed grass and weeds to overrun the orchard. Some men with the best kinds will never produce fruit larger than a walnut.

I recall the case of one man who planted 1,000 trees of common standard varieties, Oldmixon, Stump, Crawford's Late, Rare Ripe, etc. He plowed and harrowed from April till September, to keep his orchard clear, manured heavily with stable manure every fall, allowed no borers in them. The 4th year he sold his crop for \$1,000 on the trees, the 5th year the same, and 6th for \$950, upon same conditions, the 7th year proved unfavorable in various respects, but still the crop netted him nearly \$900, and he considered the orchard good for seven years longer; he had just cut down an orchard which remained in good condition 17 years. A neighbor of his set 1,800 trees of similar varieties from same block, plowed his land once a year, removed borers once in two or three years, and on naturally poor soil fertilized very little, in consequence of which the trees are all yellow and small withered fruit cling more or less to the pits. The former considers his 1,000 trees the best he ever purchased, while the latter claims that he was cheated in the stock.

It is an undoubted fact that fine peaches bring extra large prices late in the season, but in repeated trials with such varieties I have never made even a partial success, and the very fact that extravagantly high rates are maintained points to a want of general success. The opinion of an intelligent and successful grower of peach trees on these points was asked and his reply was that very late varieties had not proved generally successful, but that in certain localities they seldom failed to ripen up well. Moral: the grower should invest very lightly in such varieties if at all, unless known to succeed in that particular locality. I am told that an island in Cumberland Co., New Jersey, which was formerly occupied as a truck farm, changed hands, and the new proprietor set a few peach trees

which produced very abundantly of very large fruit of extra quality and appearance, and acting upon this hint he had planted the whole island with peaches and is realizing very large profits.

One peach grower in Mercer Co., whose peach orchards were observed to produce fine crops and retain their health and vigor for a long time, declined to explain the treatment which ensured success, but it was noted that he used large quantities of ground bone and kainit.

Several rather extensive planters here, have included in their selection some varieties which are reputed to be only moderately productive, because they fully understand that a half crop will bring more money than a full one, a basket of extra fine fruit being worth very much more than two baskets of ordinary quality, and the cost of transportation, etc., being only half as much. Thorough thinning at the proper time would, of course, answer the same purpose, but this is very apt to be neglected.—*W. F. Bassett, in Popular Gardening*.

## Locating the Orchard.

If I could have everything as I would like, I should like a northwestern proclivity. Let the land lie pretty much up toward the northwest, but not to the southeast. The cold would be about the same on either side, but if the snow lies on the ground it will protect the roots of the trees. "Are wind breaks necessary?" I think they are, but the question turns on what wind-breaks really are. I do not think matted rows of pine or spruce are wind-breaks. It is in one sense, but it is not what we require, or what is necessary. I think it keeps off too much of the wind. I would prefer three or four rows of deciduous trees, which would allow the wind to pass through, but would at the same time break its force. Three or four rows on the north and west sides will screen the orchard as it needs to be. As to the varieties which may be profitably grown in this section, I might name the Red Astrachan. I do not think, however, there is a very great deal of profit. It is the earliest we have, and is the earliest we can grow profitably. The next apple, that is the next in order of ripening, but which should really be placed at the head of the list with respect to profit, is the Dashed of Odenburg. As much can be got out of that tree here as in any part at the world. It will bear every year. The next is the St. Lawrence. This does well and is profitable to grow, because it is fine in appearance and will bring a good price.—*Mr. Beal*.

The experiments made in 1888 in the treatment of vine diseases fully demonstrated that the copper compounds, especially the Bordeaux mixture, would prevent black rot. A circular indicating a definite line of treatment for this malady has been prepared by B. T. Galloway, Chief of the Section of Vegetable Pathology in the U. S. Department of Agriculture, at Washington. It will be sent on application to all grape-growers and others interested in fruit culture.

## Horticultural Items.

No satisfactory substitute has been found for Paris green as a certain remedy for the potato bug.

The cranberry is an American fruit which is not appreciated abroad, hence there is little demand for export. Eastern growers say the demand does not keep pace with the production, and a Cape Cod grower has eight hundred barrels unpacked.

Three miles north of South Haven, says A. C. G., lies the section of land that is believed to return more money to its owners than any other area of the same size in the State. It is almost a solid orchard of 600 acres except where the highways cross it.

The Bubach strawberry is one of the most approved new sorts, and in most localities succeeds admirably as a market variety. It is a strong grower, good bearer of large fruit, but its quality is not first-class. A small fruit man who has 70 varieties of the "best berry God ever made," gives the preference to Bubach No. 5.

An eastern lady is credited with a novel way of marking apples. A short time before they are ripe, she places a printed slip of paper with her name on it on each apple in such a position as to most favorably expose it to the sun. When the fruit is ripe, she wipes the paper off and finds her name printed plainly on the apple.

There were 79,666,488 cans of tomatoes put up by factories in the United States and Canada in 1888, and this in spite of the fact that the weather was quite unfavorable in most localities for a large crop of this vegetable. The output of canned corn also largely exceeds that of any previous year; and it is evident that canning factories are multiplying more rapidly than the demand warrants.

A CORRESPONDENT of an eastern journal who asked about the advisability of setting fruit trees on muck land is advised that the result was a complete failure so far as fruit was concerned, a perfect success in growing wood. The trees grew very luxuriantly but the fruit was green and insipid, without color or fruit taste. With the addition of sand or gravel, currants, strawberries and raspberries can be grown on muck.

This California Fruit Grower charges that Baltimore packers of canned fruits are putting their products on the markets, with labels purporting them to be California fruit. One label purports to be from the San Quentin Packing Co., when there is no cannery located there. The other label, that of a fictitious company at San Jose, is calculated to do more harm, since it covers inferior fruit alleged to come from one of California's choicest sections for the production of fine fruits.

A PLAN of blackberry growing which Matthew Crawford says is very extensively practiced in the west is to give the new plantation clean culture the first year and seed to clover the second spring. This makes its growth before the berries are formed, and it draws lightly on the soil in the summer when the berries need all the moisture. It prevents a late growth of the canes and causes them to ripen thoroughly. The fruit is always clean and there is no growth of weeds. Mr. Crawford thinks that with pretty close pruning this method might work well anywhere. In growing this fruit extensively one should raise his own roots. By so doing he can have a uniform plantation without vacancies, and all true to name.

## Apianian.

## The Blessings of a Poor Season.

Geo. H. Hilton, retiring president of the Michigan State Beekeepers' Association, in his annual address at the recent convention at Jackson, thus sums up the blessings of the past unfortunate season for apianists:

The past season has taught some of us the lesson, that it is not wise to carry all of our eggs to market in one basket; also, that mixed farming is more safe for the majority than are specialties. I think that for the past two or three years we have heard less of specialists in bee-keeping, and with my past experience in good and poor seasons, I cannot advise the masses to make bee-keeping a specialty.

But in looking over the past year, I see much to encourage us. Those who had no surplus honey at all, have been able to dispose of it at paying prices, even at exorbitant prices.

Who has heard of honey selling at 30 cents per pound, and the average price for the United States a trifle over 19 cents per pound in the middle of October? Why, the like has never been heard of since Adam Grimm made a fortune by keeping bees; but I prophesy that before March 1, 1889, there will be localities in the United States where a fancy article of comb honey will bring 50 cents per pound, and honey will never be so scarce but that a prime article will bring one-third more than a poor one, even though it be gathered from the same blossoms. This teaches us that the profits depend upon the bee-keeper, for it bees will store just as much honey in a nail-keg (which I doubt very much), it will not bring as much in the market as honey stored in beautiful white sections. But this season even the lower grades are going to be closed out at some price, and before another crop comes, we will be unable to get enough syrup for our babies.

Then the past season has established paying prices; it has demurred the markets, and has forever downed that ghost, "manufactured honey." It is not that enough to pay for all our losses (or rather, for what we have not had to lose)? We start in next year with a clean market. There will be a demand everywhere, and it is the duty that every bee-keeper owes to himself, to retain this demand, which is easily accomplished by never sending a pound of honey to the large markets, until you have supplied your home and surrounding markets; these you can control, but as soon as you glut the large markets, you establish a ruinous market at home.

I had no trouble in selling comb honey at 20 cents per pound until several carloads were shipped into Grand Rapids, and sold at 10 cents; then our merchants learned that they could ship honey from Grand Rapids, and retail it at 15 cents, at a better profit than the commission I was paying them; and for the past four years, 15 cents has been our retail price, for in a small place it was very hard to raise the price, unless the market is entirely bare, or will be at the opening of another honey harvest.

Then in addition to the prospects of good prices for next season, the bees as a rule have gone into winter quarters in excellent condition. The fall rains gave us a nice fall flow of honey, which caused the brood-nests to be well supplied with a good quality of honey, and many of us secured a little surplus. Since the season ended, the rains have continued, and the clover has a beautiful start for next season's crop. We need not be awake at night fearing that we must contend with free trade in sugar, because we have not.

THE American Bee Journal, in its issue for Jan. 5, has a very correct likeness of Prof. A. J. Cook, of the Agricultural College, so widely known as a writer on apicultural, entomological and other scientific topics.

BYRON WALKER, of Cape, had 12,000 pounds of honey as the product of his apiaries in 1888, and says he had only half a crop at that. Last summer he went to Helena, Ark., bought 100 colonies of bees, and arranged them in good shape to secure honey. After securing 3,000 lbs. he sent the bees to Cape, where he set them at work again and got 8,000 pounds. At the close of the season he had 280 colonies. His success this year encourages him to try this scheme again the coming season.

## NEW ADVERTISEMENTS.

## Dyspepsia

Makes the lives of many people miserable, and often leads to self-destruction. Distress after eating, sour stomach, sick headache, heartburn, loss of appetite, faint, "all gone" feeling, bad taste, coated tongue, and irregularity of the bowels, are some of the more common symptoms. Dyspepsia does not get well of itself. It requires careful, persistent attention, and a remedy like Hood's Sarsaparilla, which acts gently, yet surely and efficiently. It tones the stomach and other organs, regulates the digestion, creates a good appetite, and by thus overcoming the local symptoms removes the systemic effects of the disease, banishes the headache, and refreshes the tired mind.

"I have been troubled with dyspepsia. I had but little appetite, and what I did eat I did not get well of it. In an hour after eating I would experience a faintness, or tired, all-gone feeling, as though I had not eaten anything. My trouble, I think, was aggravated by my business, which is that of a painter, and from being more or less shut up in a room with fresh paint. Last spring I took Hood's Sarsaparilla—look three bottles. It gave me an appetite, and my food relished and satisfied the craving I had previously experienced." GEORGE A. PAGE, Watertown, Mass.

**Hood's Sarsaparilla**  
Sold by all druggists. \$1.50 per bottle. Prepared by C. I. HOOD & CO., Apothecaries, Lowell, Mass.  
**100 Doses One Dollar**

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Japanese Buckwheat, Alsike Clover Seed, etc.  
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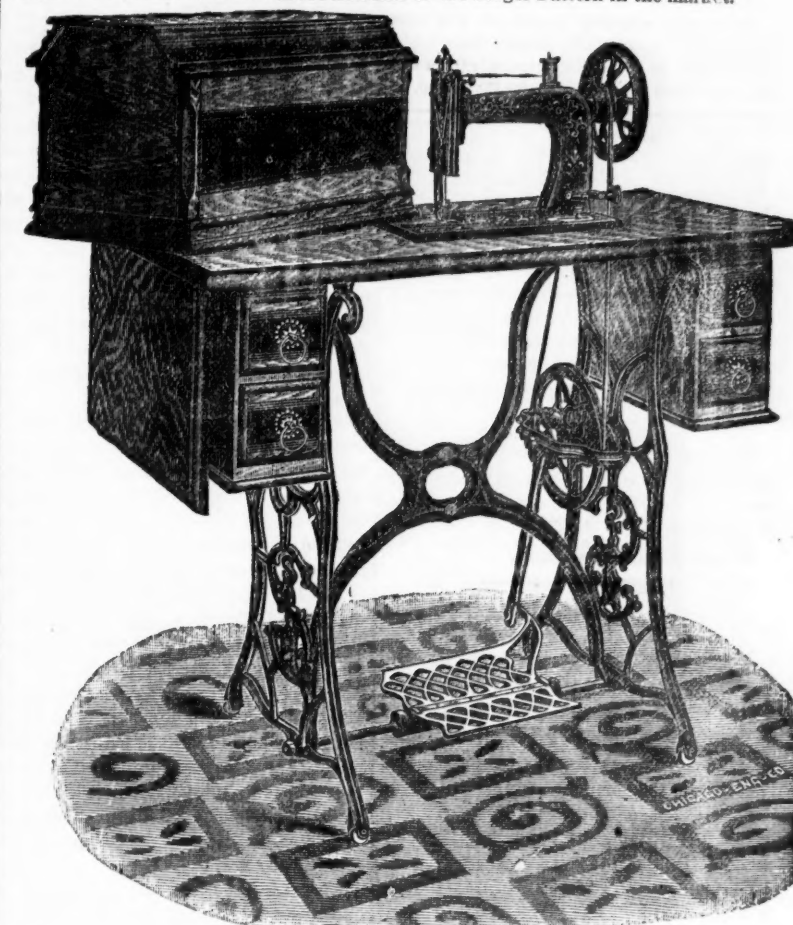
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With each of these machines we furnish one Ruffler, one Tucker, one set Hemmers, one Foot Hammer, one Sewing Foot, one Wrench, one Oil Can and Oil, one Gauge, one Gauge Thumb-Screw, one extra Thread-Plate, one extra On-Check-Spring, one paper Needles, six Bobbins, and one Instruction Book. These articles are all included in the price named. Bear in mind that these machines are thoroughly made and of first-class workmanship, and

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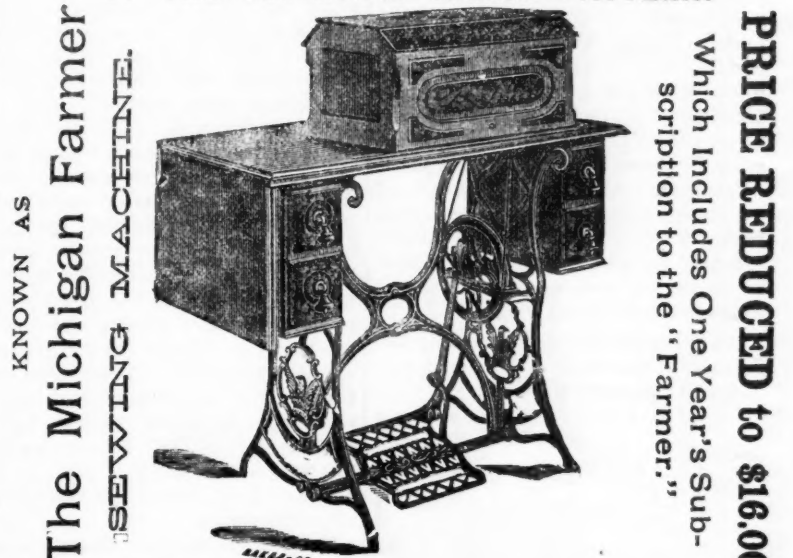
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ONE OF THE BEST FINISHED AND HANDSOMEST MACHINES MADE.

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This is the latest improvement in Sewing Machines, and combines all the best qualities of high-priced machines, while it contains others, making it superior to any. Its simplicity is a marvel. It contains but little more than half the number of parts of any Lock-Stitch or Shuttle Machine. Its new upper feed is very effective in changing from thick to thin goods, the tension may be turned to any angle without raising the pressure foot. It has the new, perfect, Self-Setting Needle in use, which may be set in the dark. The improved loose wheel works automatically, so there is no necessity of turning screws, loosening springs or catches. This machine makes the nicest stitch of any machine without exceptions. Both sides are so even and regular it is almost impossible to tell the right from the wrong side of a seam. The attachments, which are furnished with each machine free, are unsurpassed in workmanship, finish or the fine work they will do. The instruction book contains a large engraving of each, with full directions for using. The furniture is black walnut, of the style represented above, and very finely finished. In fact, we claim the "Jewel" to be the best made, and to do better and a wider range of work than any machine in the market.

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